

THE
BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXVI.

THURSDAY, JULY 17, 1862.

No. 24.

NOTES OF CASES OF PUERPERAL CONVULSIONS, WITH REMARKS.

BY WALTER CHANNING, M. D.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—The following cases from my notes are at your service. Three cases occurred in less than three weeks, each of which I saw in consultation. I have not heard of any other cases, and I have taken some pains to learn if any have occurred. Allusion is made to the hysterical complication in puerperal convulsions. This is not a very rare occurrence. For the most part, at least as far as I have seen such cases, the fits have *followed* delivery. I recollect but few well-marked cases of hysterical convulsions, either *preceding* or *attending* labor. This is worth remembering, for prognosis will be aided by having it in mind. In the *hysteric* case the interval of fits is for the most part filled with all sorts of wild talk, and tossings of the body—with laughing and crying or sighing—violence, or a restlessness, requiring of the attendants the utmost care lest the patient is injured by the self-inflicted violence—the clothes are torn off—and maniacal phenomena of all kinds show themselves. I have spoken of the disease in its worst and most frequent manifestations. One who has not seen them can hardly imagine what these are, or may be. I have known of no case in which puerperal mania has followed. The subject is more particularly dwelt upon, because cases are frequently reported as *genuine puerperal convulsions* which are not so; and “recovered from without medication”—the attempt being to prove that active means are unnecessary in puerperal convulsions, and that ether and chloroform are showed by the results to be useless in the genuine disease. Mrs. B.'s case shows how valuable is the combination of ether and chloroform, in a protracted and violent case. It would be easy to strengthen the evidence by more cases, if I thought it necessary to do so.

There is another advantage in the discrimination between the genuine and hysterical disease, and especially when complicated.

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There is less danger in such; and though our declared prognosis should be accompanied by caution when presented to friends, all parties may have the benefit of such confidence about results as always aids in the management of seriously threatening disease.

CASE I.—May 30, 1862. Mrs. B., 25, second pregnancy. Was seized with convulsions during labor. Very slight œdema of external labia. Invasion sudden in apparently healthful labor. I reached the address in the evening. The child was born just as I entered the chamber. The placenta followed soon after. The convulsions were strong—no consciousness in the interval, and none for some time after, and her attending physician left. I remained. Fits returned in the course of the night. Ether, which had been successfully used, was continued. Intervals between the attacks grew longer and longer, and I left in the morning. Consciousness had not returned. I met her physician again in the afternoon. He had used chloroform and ether in proportions of one part of the former to three of the latter, as agreed upon, should convulsions return. They did return, but after the use of the compound no more fits occurred. Mrs. B. recovered her consciousness in the course of the next day, but had no memory of the labor or of the convulsions. Recovery rapid and perfect.

Remarks.—This case was the *second* one in which convulsions had occurred in the same person. Her first labor occurred naturally, but her state was not promising of easy delivery. Her general health was not good. There was great œdema of the external organs, with much soreness, rendering examination so difficult that it was necessary to make many punctures for the discharge of the water. A single convulsion occurred, and after a long interval another. I was desired to see her in consultation. The fits were of average severity, without intervening consciousness. Labor was effected by uterine action. Sulphuric ether was inhaled with excellent effects, and after-recovery was good. About four months after, when health was good, paralysis of one side of the face occurred, which gradually was entirely recovered from.

CASE II.—June 12, 1862. Mrs. L., 42. Married about a year—first child—has vomited obstinately for some months last past—has lost flesh—no anasarca—no known cause of convulsions—on the 11th had veal cutlet for dinner, and relished it—had headache in evening, but slept at night. Convulsions occurred in the morning of 12th, not preceded by labor pains. Convulsions very declared, with no return of consciousness—slight show.

I was called to see Mrs. L. about 2, P. M. She was in a fit when I reached the address. Her physician reported that he had not made any examination, as there was no evidence of present labor. Pulse rapid—hard but not full. Face pale, at times reported to be purple—eyes wide open, pupils fully dilated—mouth bloody from wounded tongue, full of blood and mucus, giving character to respiration, but which was hardly stertorous—decubitus on left

side—limbs flexed—whole body convulsed with strong jerking of upper extremities—skin cool—a fit was present as I entered the chamber. Her physician being absent, another convulsion occurred before he returned, say in about twenty minutes after the preceding, which was the thirteenth. Dr. Watson having arrived, an examination was made. There was a show, or discharge of black blood from the vagina. The child's head was fairly in the pelvis—os uteri dilated, say to half its extent, being a thick, firm ring but *dilatable*. The membranes were entire, and easily reached in the sacral hollow, but not at all before the foetal head—being, on the contrary, in close contact with it. There was no uterine contraction, the membranes being not at all tense. They were broken, when a full discharge of black fluid—the color produced by the washing away of the black blood which was in the vagina. The delivery was easily effected by the forceps. The child, a female, dead, was quite large. No uterine contractions were noticed, and as convulsions did not recur during the operation, the condition of the uterus was easily ascertained. The womb contracted well after delivery, bringing the placenta into the vagina from which it was easily removed. The blood, which followed its removal in natural quantity, was black. The convulsions ceased, and the breathing at once improved, upon the rupture of the membranes. Ether (sulphuric) had been used during the convulsions before my arrival, but as the nurse was exceedingly annoyed by it, it making her sick, it is probable that the quantity inhaled by the patient was not excessively large. It was made sufficient, however, after my arrival, and the record shows that convulsions did not recur. It was agreed that if convulsions returned, an injection of assafoetida in full quantity with tinct. opii should be employed. I have found good effects to follow this treatment *after delivery*, when it has seemed as if the continuance of convulsions might depend on quite different circumstances from the existing ones under which the disease began.

After a short suspension of convulsions, they returned with greater violence than before, being accompanied by stertor, lividity, &c. Death occurred, at 10, P. M. No farther treatment was attempted, as it was clear to Dr. W. that nothing was to be hoped for from the use of any means.

Remarks.—There was no anasarca in Mrs. L's case. The condition of the urine is not known. It is so difficult to learn the true state of the urine from what is drawn by the catheter during labor, that results are hardly to be relied on. It is not easy so to introduce the instrument in such cases as to prevent the entrance of some of the fluids in the neighborhood, mucus, liquor amnii, serum, blood, &c. So obstructed is the catheter sometimes in this way that the urine will not flow through it.

In regard to the flow of black blood before and after delivery—occurring before, it shows that the placenta had been partially detached. The color of the liquor amnii shows that it was mixed with this blood

after the membranes were broken—and especially did the ordinary hæmorrhage which precedes the delivery or removal of the fully detached placenta exhibit this color. A question arose, had the inhalation of ether anything to do with the production of this color of the blood? It should have been said that the blood from the mouth had the same color.

The age of this patient, being her 43d year, is rather advanced for pregnancy; but it is doubtful if this had any connection with the disease. There was no error in diet, as far as I could learn, which could account for it. The occurrence of obstinate vomiting three months before the term, and its continuance, may have some connection with its production. Ordinarily this produces other effects, especially prostration, with rapid emaciation, sometimes making premature delivery necessary to save life.

The immediately precursory symptoms in this case were pain in the head, and great distress with pain in the epigastric region, extending into both hypochondria. This latter symptom is regarded by Denman as one of the more frequent ones of succeeding convulsions; whilst authors generally regard the pain in the head as among its common and preceding ones.

CASE III.—June 20th. Mrs. L., 24.—Fifth labor. All her previous ones were natural and easy. After the third, after-pains severe, for which sol. morph. sulphat. ʒi —to be repeated if pains continued. Got one dose, and soon after had convulsion. This was the only one—recovery.

Her fifth labor, June 20th, 4, P.M. Severe after-pain. Her physician, who attended her first, wrote again for the above solution and left. But before it was taken, a convulsion. Her labor was very easy, its precursory stage hardly noticed. At 7, A.M., a strong expulsive effort, and literally during this only pain, birth occurred—a female; 8 lbs. The last stage was completed very soon after the birth, and without accident. The child was born before her physician arrived. Much anxiety followed—at 7, A.M., fears of death—moaning, weeping, &c., pain in the head, and much heat of scalp. At 1, P.M. a convulsion, after severe pain and heat of head. Leeches were applied, and lupuline given, five grs., to be repeated p. r. n. Ice in a bladder constantly to head. No consciousness, no stertor. Tongue not wounded, no mucus in mouth. At 8, second fit very strong—the whole body convulsed. There were eight convulsions in all, the last at 11, A.M., on the 21st. Lochia suppressed. Sulphuric ether had been faithfully used during the disease, and always with relief.

June 21st, 5, P. M., I was called to see Mrs. L. with her physician, and got from him the above account of her case.

I found her lying, as in a sound sleep, on her left side, breathing slowly, with perfectly natural expression of countenance—skin natural—pulse 60—pupils natural—womb well contracted—bladder empty, it having been unconsciously evacuated—no œdema. She had swallowed some gruel, and now swallowed water without

difficulty. Upon being spoken to with loud and distinct voice, an effort was made to answer questions. I was desirous to get some urine for examination. The attempt was strongly resisted, and I requested Dr. — to desist, as from the circumstances under which convulsions had occurred, I thought much disturbance might hazard a recurrence of them. It was agreed that sulphuric ether should be again used if indicated.

There were no more convulsions. The progress to consciousness was very slow. It was not until the fifth day from the first fit that she was able to speak. She opened her eyes two days before, but noticed nothing. The following day she watched moving objects in her chamber, and the succeeding one to this, spoke. There were no hysterical complications after delivery. This was the third case in which the same patient has had convulsions in a succeeding labor, and in this one, two labors occurred between the two attacks now reported. The first followed the use of sol. sulphat. morphia, to check after-pains. The same remedy for the same pains was prescribed in this labor, but another physician being called in, stopped the use of the anodyne. Convulsions, however, occurred, and much more severe were they than were the first, there being then but *one*. *Causa latet, vis est notissima.*

The first case in which convulsions occurred in the same person, happened many years ago, but was impressed upon my mind after a manner never to be forgotten. It occurred in the country, as did the first, described above.

Mrs. W., about thirty, was seized with convulsions during healthful labor. They were more violent, and each of longer continuance than I had ever seen. It was hardly possible to keep the patient on the bed, or prevent her doing herself great injury. The intervals were not, as in ordinary puerperal convulsions, passed in heavy sleep, with stertorous noisy breathing, but in screams and shrieks—singing to the top of the voice—talking—praying, &c., as from the Book of Common Prayer, with perfectness of memory which could not be exceeded. Accompanying these efforts of voice, were frantic tossing of the whole body, and with a violence which seemed constantly to threaten life. A lull would come—perfect silence and repose—and then a violent convulsion. One, two, and three days were passed after this manner, before such entire exhaustion occurred as to prevent the slightest motion, and to threaten instant death. Mrs. W. had a long convalescence, and ultimate perfect recovery.

In her second labor convulsions occurred very much as they had in the first, with precisely the same accompaniments, and recovery. Mrs. W. has not been pregnant since.

Remarks.—In both of these attacks of convulsions in the same person, the hysterical accompaniment was so perfect as to distinguish them entirely from the genuine puerperal disease, and in this was promise of recovery. In what the hysterical puerperal convul-

sion differs from the genuine or epileptic, is not always attended to; and the recovery may so come to be ascribed to treatment, when it is in fact owing to the nature of the disease itself.

MEASLES WITH PROTRACTED BRONCHITIS, COMPLICATED WITH
CROUP, AND FOLLOWED BY PNEUMONIA—RECOVERY.

By W. W. WELLINGTON, M.D., CAMBRIDGEPORT.

[Communicated for the Boston Medical and Surgical Journal.]

DURING the spring months, measles was very prevalent in Cambridgeport. Most of the cases were mild, but a few were severe, and in the latter class may be ranked the following.

A boy, two years old, exhibited the precursory symptoms of measles about the 4th of April. The eruption appeared on the 7th. The disease progressed favorably until the 11th, when it was noticed that the child was hoarse, and had some difficulty in breathing. I saw him for the first time on the next day. He had passed a restless night. The voice was husky, the cough had the peculiar sound of croup, and the breathing was labored and difficult. On examination of the throat, patches of lymph could be seen on the tonsils. During the day, the dyspnoea increased.

On the next day (13th) the breathing was very labored and distressing, especially during paroxysms, which occurred every few hours. The voice sank into a whisper; the pulse was feeble and irregular; the features were swollen, and the countenance was bluish. There were great restlessness and jactitation. The respiration was not loud, but close and muffled. In addition to the lymph on the tonsils, there was a whitish, pastry, secretion on the soft palate. Matters looking desperate, I asked the advice of a medical friend, as to the expediency of tracheotomy. He advised against the operation, but thought the chance of recovery was small.

On the next day (14th) the symptoms were nearly the same. The breathing was no worse—in fact, this was hardly possible—but there was no improvement. At each visit I expected to find the child dead.

On the evening of the next day, there was a little improvement. The breathing was more easy, though very rapid; the cough was becoming loose; the child slept considerably, and took nourishment; there was some fever, and the pulse was 120.

On the 23d (7 days later) the breathing was much improved; the cough was loose, but muffled; there was no effusion on the tonsils or palate; but the child was feverish, had no appetite, and could not speak above a whisper.

On the 26th (3 days later, and 14 days from the access of symptoms of croup) the natural sounds of the cough and voice began to return, and the child seemed to be slowly improving.

No membrane (so far as is known) was expectorated.

I did not see the child again until the 30th inst., four days from the date of the last visit. During the interval he had become worse. The symptoms of croup had nearly subsided, but there was a bad cough, the pulse was rapid, with daily paroxysms of fever. Auscultation revealed the existence of pneumonia of the larger part of the right lung, with mucous râles in the left lung.

During the next three weeks, the child remained very ill. The cough was bad, and the pulse rapid; there were great emaciation and debility. The right lung continued hepatized—the dulness and bronchial respiration being distinct and well-marked; and the bronchitis continued in the left lung. At times, there would be an apparent amendment; the appetite and strength increasing a little, and the febrile symptoms subsiding. Then there would be a relapse, and all the bad symptoms would return. Nature, however, after a long contest, got the better of the disease, and, on the first of June, nearly two months from the commencement of the measles, our little patient was convalescent. He is now well.

This was a case of measles with protracted bronchitis, complicated with croup, and followed by pneumonia. This complication I have never met with before, and I think it not common.

As regards the diagnosis, there can be no doubt of the existence of the measles, the bronchitis and the pneumonia. A doubt may arise whether the croup was of the membranous variety, from the fact that no membrane was expectorated. But the severity and duration of the symptoms, and the membranous exudation on the palate and tonsils, render it probable, if not certain, that there was also a membranous secretion in and about the larynx, extending, perhaps, into the trachea. It probably was not copious, nor very tough, and, when ejected from the larynx, was swallowed.

Measles, complicated with croup, is usually fatal. The recovery in this case was not owing to any remedies prescribed by me. The only credit I take to myself is, that I did not unreasonably interfere with, or interrupt, the efforts of nature; and possibly that I slightly aided her in these efforts. At my first visit leeches were ordered; the leech-bites bled freely, but this did no good. The inhalation of steam was tried, but the child was more restless and uncomfortable in the steam-bath than out of it; and, after a fair trial, this was abandoned. Emetics had been administered before my arrival; they were not repeated, but the syrup of ipecac was given in small doses, which would do no harm, if they did no good. Outward applications to the throat afforded relief; and one of the most efficient of these was opium, quilted into a bag, which was dipped into hot water, and applied over the larynx and trachea. These remedies, with opiates internally, an occasional dose of physic, warm baths, and nourishment as much as the child could be induced to swallow, which was not much, constituted the treatment.

The pneumonia was treated by mild opiates, counter-irritation, and a nourishing diet.

Had the treatment been very active, and had tartar emetic, calomel, &c., been given freely, as is sometimes advised, the result might not have been favorable.

Had tracheotomy been performed, and had the child survived the operation, another might have been added to the list of cases, exhibiting the efficacy of this mode of treatment, when other means had failed.

ON INJECTIONS IN THE TREATMENT OF UTERINE DISEASES.

BY ROBERT ELLIS, ESQ., OBSTETRIC SURGEON TO THE CHELSEA AND BELGRAVE DISPENSARY.

I HAVE a few practical remarks to make on the subject of this paper, which may be interesting to the readers of *The Lancet*. They have been suggested to me in the course of some observation of methods of treatment adopted by others and by myself in dealing with the peculiar classes of ailments assembled under the generic name of uterine inflammation and ulceration.

First, as regards the *uses* of injections. These may be learned by their failures. They are insufficient for the cure of ulceration, if it has existed for some time, and I have no satisfactory evidence that they can cure this condition effectually under any circumstances. They are not able to cure leucorrhœa in the great majority of cases. I have seen it return again and again after the injections have been discontinued. They are useless for the cure of inflammatory induration and hypertrophy of the cervix, and they are equally ineffectual in the sole treatment of the spongy, indolent, patulous, and ulcerated cervix occasionally met with in obstetric practice. I can furnish abundant proof of the correctness of these statements, and it is much to be desired that they were able to win the ascent of all who are engaged in this department of our art—for our own credit and for the welfare of the sufferers.

They are of great use notwithstanding; but it is only in their secondary position as adjuvants to a higher class of remedies. For the relief of pain, for the removal of acrid discharges, for the deodorization of offensive, and for the suppression of exhausting fluxes, injections are of value. They are of use for giving tone to a relaxed and weakened organ, and as astringents for the support of the womb having a tendency to prolapse. Conjoined with judicious and appropriate cauterization, they are of the greatest use in hastening the cure of the inflamed and ulcerated womb; and it is of common observation, that patients who are careful in the use of injections (as in private practice), get well very much quicker, and with less pain, than those who (as at public institutions) neglect this means. When the cure is complete, injections are still of much use, but it is most difficult to convince the patient on this point. In married life it ought to be easy to induce the patient to persist in this most healthful duty; yet the reverse is the fact.

The substances adapted for injections in commonest use are of the stimulant and astringent kind. Of these, notwithstanding the opinions and practice of others, I consider the sulphate of zinc the most unjustifiable. I think I have seen it the cause of much irritation and mischief, and it is difficult to believe that the constant use of so poisonous a substance over so large a surface of mucous membrane can be other than injurious. The nitrate of silver is another substance most unsuited for injection, yet very frequently ordered for use. The mucus of the vaginal canal instantly decomposes it if used in a weak injection, and if in a stronger form, the excoriation of the external parts, together with the mischief inflicted on the linen, hands, and utensils of the patient, preclude its repeated employment. I have made use of a variety of substances for this purpose, but as simplicity and economy are chiefly of consequence in a daily matter of this sort, the result arrived at is, that a solution of alum, either alone or in decoction of oak-bark, is, after all, the best and most effective injection we can prescribe. A mixture of equal parts of tannin and alum forms a more elegant, but also more costly substance as an astringent. For the anodyne injections, solutions of belladonna and of opium are the only serviceable remedies, and to these may be added the liquor plumbi and hydrocyanic acid with occasional good effect. For emollients, milk-and-water, linseed-tea, barley-water, and thin starch or gruel, are very valuable. The injection of gases and vapors is a very uncomfortable proceeding, and is not always free from a certain amount of risk, but considerable relief may sometimes be thus obtained when other means are useless. Of these, the most valuable are the carbonic acid gas and the vapor of chloroform.

Lastly, of the *instruments* for injection. Gooch's bent-pipe instrument is a cumbrous and dangerous apparatus, very apt to get filthy, and to inflict injury on the cervix. The glass "female syringe" is a most absurd contrivance for cleansing a canal so capacious as that for which it is intended. It is also often broken, and sometimes within the canal itself. The ordinary pump, with elastic tube, has the disadvantage of requiring the assistance of a second person for its use. For the use of the poorer classes a simple and excellent instrument was contrived by me some years ago; it consists of a piece of gutta percha tube, five feet long, fitted at its upper end with an inch or two of elastic tubing: this could be slipped over the mouth of a common kettle, and the other end being placed in its proper position, the inversion of the kettle produced a constant stream of water of sufficient force to well wash out the canal. The same object may also be accomplished (and this method is largely used in France) by the use of a long syphon, the upper end being immersed in a reservoir of water, and the lower retained in the canal by the patient. The French have an extraordinary variety of instruments for this purpose, amongst the most useful of which is one on the principle of the moderator lamp. Without exception, however, the

most commodious and useful of all instruments for uterine injections is the elegant arrangement known as Dr. Kennedy's, and now becoming much used in this country. It may be employed either for gases or for fluids; as a douche or as an enema. An ingenious contrivance, known as the barrel syringe, made of caoutchouc, is also useful for this purpose; but the action of its valves is less to be relied upon than in the former instrument. For general use the douche just named is the best of all the varied forms of instrument for vaginal injections, and it will probably ultimately replace every other kind. Its valves require occasionally a little looking after and cleansing, but this is simple enough, as they merely consist of two metallic peas.

This article may be truly said to be drawn in "first lines," but experience has long satisfied me of the great importance of these homely remarks. If it be admitted that injections have a remedial value, it is certainly the duty of the medical man to take care—1st, that they be employed for such uses as they will most surely subserve; 2d, that only those substances be used which are adapted for those ends; and lastly, that the instrument for their employment is a simple and efficient arrangement. Instances of failure on all these points are so common as to justify this note on a very common-place subject.—*London Lancet.*

ON JAUNDICE: ITS PATHOLOGY AND TREATMENT.

By GEORGE HARLEY, M.D., PROFESSOR IN UNIVERSITY COLLEGE, LONDON.

[From the Proceedings of the Royal Medical and Chirurgical Society, May 13th, 1862.]

It is universally admitted that the facility of the diagnosis of jaundice is only equalled by the obscurity of its pathology and the uncertainty of its treatment. In this communication, therefore, the author set about unravelling the nature of the various morbid conditions which give rise to it; and pointed out how, notwithstanding the seeming discord, they could all appropriately come under the two common heads of "jaundice from suppression of the biliary function," and "jaundice from the reabsorption of the secreted but retained bile." Moreover, Dr. Harley showed that the pathology of jaundice resulting from suppression is totally different from that arising from obstruction; and, consequently, that a line of treatment which would be appropriate and beneficial in the one form, would be detrimental, if not actually hazardous, in the other. Fortunately, however, the author pointed out a new method of distinguishing the two forms of the disease when all the ordinary means of symptomatic and physical diagnosis prove unavailing. The method consists in analyzing the urine, which, he finds, contains different morbid products according to the particular form of the disease. Thus, for example, in jaundice from suppression the urine contains only those biliary ingredients which exist preformed in the

blood. In jaundice from obstruction, on the other hand, the urine contains, in addition to these, the materials generated in the liver itself, and which have been reabsorbed into the circulation from the distended gall-bladder and ducts. A simple mode of distinguishing the two conditions is, to add to about two drachms of urine half a drachm of strong sulphuric acid, and a fragment of loaf-sugar the size of a pea. If at the time of contact of the two liquids a scarlet or purple color is produced, it proves that the acids of the bile are present, and the case may consequently be put down as one of jaundice from obstruction. On the other hand, if no bile-acid reaction, but merely a browning of the sugar, be observed, the case is in all probability one of suppression. Dr. Harley pointed out, however, that care must be taken not to confound the two cases; as jaundice from obstruction, especially the severe form, often merges into jaundice from suppression.

The author also confirmed Frerich's statement regarding the presence of tyrosine and leucine in the urine of acute atrophy of the liver; and further stated that he had also found these substances in the urine of chronic atrophy, so that their presence might aid in the diagnosis of the latter as well as of the former condition of the hepatic organ. Several cases were cited illustrating the value of the different methods of diagnosis; and the author concluded by pointing out the class of cases in which mercury and other remedies were likely to be beneficial, and where they were likely to do injury. He specially recommended the employment of benzoic acid in jaundice from suppression, and inspissated bile in that arising from obstruction, in which latter class the patient frequently dies from slow starvation, in consequence of the absence of bile in the digestive process causing imperfect assimilation of the food to take place. Dr. Harley also called special attention to the fact that bile, as now employed, more frequently does harm than good; for, when given along with the food, instead of aiding the digestive process, it actually retards it by interfering with the action of the gastric juice. If, on the other hand, bile be administered, as the author proposes, at the end of stomachal digestion, it acts (as in the healthy organism) on the chyme, and renders it fit for absorption. In order still further to insure this desirable object, Dr. Harley has had bile specially prepared and put up into capsules, which are not readily acted on by the gastric juice, but which, on being dissolved in the duodenum, allow the bile to come in contact with the food at the proper moment, and thereby enable the physician to imitate nature, and supply an important element to the system.

The communication was well illustrated with preparations and drawings.

Dr. Edward Smith, after dwelling upon the great interest of the paper, referred to two subjects explained in it which had struck him—the importance of determining the amount of urea evolved, and the alleged mode of action of acids and alkalies. In the case

referred to there had been a large ingestion of nitrogenized food, and yet the amount of urea had diminished from about 450 grains per day, which at fifty years of age would be about the standard quantity, to between 300 and 400 grains—a fact which proved clearly that a large portion of the nitrogenized food had not entered the blood, but had passed off by the bowel. He thought the determination of the amount of urea in cases of defective assimilation was of the utmost value; but since there were normally great variations in the daily elimination of urea, it was essential that experiments should be extended over several days successively; and it would be more satisfactory to determine at the same time the quantity of nitrogen eliminated by the bowel. He considered that the explanation of the mode of action of acids and alkalies was most ingenious, but he doubted as to its validity. It might be, as suggested by the author, that an alkali being given excited the formation of gastric acids, which then passed into the bowel and interfered with the alkalinity of the biliary and pancreatic juices, and thus prejudiced the digestion of fats; but, if so, the smaller the quantity of alkali administered, the less amount of acid secretions would be induced. Without admitting or denying the explanation, he must affirm that alkalies were very serviceable in numerous cases of jaundice.

Dr. Chambers said the author had referred to jaundice caused by pneumonia and the zymotic fevers, but had not explained how it occurred. He wished to ask the author if in these cases he had examined the blood, and if so, in what state and form the coloring matter was found. In pneumonia there is coloring matter in the fæces and urine, and also in the skin, and the serum of the patient's blood is dark. In these cases there is no obstruction of the bile-ducts. It was said by some that jaundice occurred in those cases of pneumonia in which the right lung was affected; but he (Dr. Chambers) had found it in cases of pneumonia on the left side. Again, in zymotic fevers there was no local action. Cases of this kind had an important bearing on the explanation of jaundice.

Dr. Marcet said the examination of the fæces would often clear up difficulties in the diagnosis of the cause of jaundice. If the bile is retained, there is in the fæces an abnormal quantity of fat, and hence the fæces are white, and by alcohol much fat may be extracted. There was not, however, enough to be recognized by the eye. The fatty matter does not exist as a neutral fat, but as fatty acids. This passage of fatty matter showed that it was not the pancreas alone which had to do with the digestion of fats. In reference to the method of administering bile by the stomach in cases of jaundice, he (Dr. Marcet) thought there would be considerable danger of inducing vomiting.

Dr. Edward Smith asked Dr. Marcet if he thought that, in cases of phthisis in which, large quantities of cod-liver oil being given, there was fatty matter in the stools, this was due to deficiency of bile?

Dr. Marcet said he should infer that the oil was in excess rather than that the bile was deficient.

Dr. Harley remarked that he was much gratified by the interest shown in the paper by the members of the Society, and glad to find their views so much in accordance with his own. The analysis of the urea had been made for the precise purpose Dr. Smith mentioned, and in the case in question had afforded most important information, not only as regards the diagnosis, but also in relation to the treatment. In reply to the remarks of the President and Dr. Chambers, he said he thought that the pathology of cases of jaundice accompanying pneumonia came under the head of jaundice from suppression, and more particularly that kind arising from passive congestion of the liver. It had been shown in the communication, for example, that jaundice is a common accompaniment of any cause obstructing the passage of blood through the lungs, capable of producing a sufficient amount of hepatic congestion to derange the secretion of bile. In reply to Dr. Marcet's remarks regarding the action of bile on the fatty acids of the chyme, Dr. Harley stated that he had pointed out that action in an article, "On Digestion," published in the *Medico-Chirurgical Review*, either two or three years ago, and that he considered the presence of a large quantity of fat in the stools a most important diagnostic sign in jaundice, as it indicated that the pancreatic as well as the bile duct was occluded; and, moreover, pointed to the probable seat of the obstruction, which, in the great majority of such cases, would be found at the head of the pancreas itself.—*London Lancet*.

Reports of Medical Societies.

PROCEEDINGS OF THE BERKSHIRE MEDICAL SOCIETY.—June 25th, 1862, the Society met at Pittsfield, in the Chemical Hall of the Medical College.

Dr. COLLINS, the retiring President, invited to the chair and presented to the Society his successor, Dr. SELDEN JENNINGS, who with a few appropriate remarks accepted the post for the year, and promised a faithful discharge of its duties.

After the reading and approval of the minutes of the annual meeting, the President presented a letter from Dr. Cotting, Recording Secretary of the Massachusetts Medical Society, in which Pittsfield was designated as the place of its next annual meeting—time, the third Wednesday in June, and Dr. Timothy Childs was announced as the Anniversary Chairman.

Dr. MILLER stated that he had proposed the name of Dr. Henry H. Childs, and that it was for him that the vote was given.

Dr. H. H. CHILDS would gladly waive his claim in favor of his son, but his son was no longer a resident of Berkshire, and might not be present. He congratulated the Society on the proposed visit; summed up its advantages, and was in favor of immediately proceeding to the choice of the other members of the Committee of Arrangements.

After some discussion, the President was authorized to appoint for this purpose five members, which he did as follows: Messrs. C. T. Collins, C. C. Holcomb, A. M. Smith, Geo. C. Lawrence, and J. L. Miller.

In the discussion of the subject it became evident that hospitality and zeal for the honor of the profession were the ruling motives of action.

Dr. A. M. SMITH introduced the subject for discussion, viz., *Puerperal Convulsions*, by reporting the following cases.

CASE I.—Season, spring. Age, 40. Temperament, lymphatic. Third pregnancy, at term. Result, death of mother and child. This patient was seen by Dr. Smith only a half hour before death; labor had lasted thirty-six hours; only one convulsion took place. The patient had been managed by a "hard-hearted and soft-headed nurse;" she had had but little exercise, had lived high. Her weight was 250 pounds.

CASE II.—Season, autumn. Age, 26. Temperament, nervous. Third pregnancy, at term. Result, mother and child saved. Labor of twelve hours' duration. Coma for six hours. Convulsions for eight hours. Treatment, "heroically bled." She was about the house in a week.

CASE III.—Season, spring. Age, 20. Temperament, nervous. First pregnancy, at term. Result, mother and child saved. Convulsions came on after delivery, five in number. No coma. Treatment by anodynes.

CASE IV.—Season, spring. Age, 26. Temperament, lymphatic. Second pregnancy, at the eighth month. Result, recovery of mother, loss of child. Convulsions lasted twelve hours, labor eight hours, coma forty-eight hours. Treatment, venesection and anodynes. This was the second labor at the eighth month; the previous labor had been like this one in every respect. Since the last, she has had an abortion, also attended with convulsions, but her health is still good.

Dr. SMITH said he expected to find a difference of opinion on the subject of the treatment of puerperal convulsions. He recognized the hysteric, epileptic and apoplectic forms of the disease; had regarded the two latter as imperatively demanding venesection, but endeavored also to remove the exciting cause, and diminish irritability by narcotics.

Dr. STILES stated that he had bled but once in his practice, and that was in a case of puerperal convulsions with albumen in the urine, in which both mother and child were lost; that was eight years ago, and now he would employ a very different treatment. He reported the following case, occurring in April last. Age, between 20 and 25. Temperament, lymphatic. First pregnancy, at term. Result, mother and child saved. Treatment, etherization, cupping of neck. Duration of labor, twelve hours; convulsions commenced with the first symptom of labor; coma after first convulsion, lasting twenty-four hours. Dr. S. thought the epileptic, apoplectic and hysterical forms of puerperal convulsions but grades of the same disorder, and that toxæmia was the cause, other conditions also having an influence. The greater the proportional development and activity of the spinal system, the greater was the liability to convulsions. Opium would produce tetanic spasms in a reptile, and convulsive twitchings of the muscles in the dog or rabbit; children were more liable to eclampsia than adults, from this cause. The experiments of Chossat proved that in inanition or wast-

ing disorders the nervous system scarcely loses in weight. It is rare to find the central nervous system suffering with the rest of the body; even at the close of wasting disorders the intellect is often clear and active. It is possible to render the nervous system predominant over other systems. Females, both naturally and from their mode of life, particularly puerperal females, are on this account more disposed to convulsive disorders. The female brain averaged one eleventh ($\frac{1}{11}$) less than the brain of the male.

Eclampsia and epilepsy differ only in their march. Their causes are of two kinds: 1st, mechanical, as when a spiculum of bone irritates the brain, or as in the artificial epilepsy produced in the lower animals by a hemi-section of the cord in the dorsal region. 2d, from substances in the blood, as strychnine, opium in the lower animals, and from organic poisons, as in *trismus nascentium*. The capillaries of the central nervous system are well supplied with muscular fibres; in no region can they be better studied. It is possible by acting on the sympathetic nerve by galvanism to contract the capillaries to such an extent that scarcely a drop of blood shall pass through them, as in experiments on the submaxillary gland. The symptoms of epilepsy and eclampsia are those of a sudden contraction of the capillaries of the brain and spinal cord; the convulsions result as they do in death from hæmorrhage; the loss of vision which immediately precedes the onset of the convulsion, was from this cause, just as it occurs on rising from a sitting or recumbent posture to an erect one. There is a *vis medicatrix* in the central nervous system protecting it from over-stimulation. When irritated from any cause, the nervous agent overleaps its usual channels, acting on the sympathetic nerve like galvanization in the experiments alluded to; blood is driven or barred from the cord, and that suddenly, producing the immediate onset of convulsions.

Pregnancy is a source of stimulation to the cord. In women dying in childbed the cord is found congested in the lumbar region, but this is insufficient to account for the disease. Neither is the predisposition to convulsive disease, in the female with any eccentric exciting cause whatever (as indigestion, constipation, hæmorrhoids, irritation of the bladder, pressure on the perinæum), sufficient to account for the convulsions, else they should be much more common. Albumen had often been found in the urine, and would be found much oftener if sought for; but even when it is not found, it is no proof that the blood disorder which gives rise to its secretion may not have made considerable progress. The presence of albumen in the urine had been attributed to the pressure of the gravid uterus on the emulgent veins; it would be more proper to look to its pressure on the diaphragm. He did not believe that the convulsions accompanying albuminuria were due to either urea or carbonate of ammonia, but rather to organic poisons, resulting from disassimilation, or an improper constitution of the organic constituents of the blood. Imperfect respiration, crowding, sedentary habits, the loading of the blood with excreta from the tissues both of mother and fœtus, were the most probable causes. He thought the disorder most frequent in the spring, from the winter's confinement to the house, from the seclusion of the pregnant female. *Trismus nascentium* could be traced to breathing a noxious atmosphere; tetanus could very often be traced to the same cause—hysteria, neuralgia, also. He therefore discarded venesection, employed anæsthe-

sia, morphine hypodermically, and sought to diminish sources of irritation; but prophylaxis was more important.

Dr. F. A. CADY reported the following cases:—

CASE I.—Season, summer. Age, between 20 and 30. Constitution rugged, plethoric habit. Third pregnancy, about six months advanced; labor brought on by a fall. Result, death. Treatment, bloodletting abundantly. About twenty convulsions occurred in a period of eight hours.

CASE II.—Season, autumn. Age, 20–30. Temperament lymphatic. First pregnancy, at term. Convulsions came on twenty-four hours after delivery. Result, mother and child saved. Treatment, cathartics, enemata. About five convulsions occurred; they ceased when the bowels were moved; the coma also.

CASE III.—Season, summer. Age, 20–30. Temperament, nervous. Second pregnancy, four months advanced. Result, recovery. Treatment, venesection, anodynes. Convulsions came on with labor pains, and ceased on delivery and the administration of anodynes.

CASE IV.—Season, summer. Age, 15–20. Temperament, lymphatic (pale and fat). First pregnancy, at term. Result, death of mother and child. Treatment, venesection, cupping, anodynes. Convulsions of one side only, paralysis of the other. Forceps delivery. Convulsions came on an hour before delivery, and coma lasted from delivery to death.

CASE V.—Season, spring. Age, 20–30. Temperament, lymphatic. First pregnancy, eighth month. Result, recovery of mother, death of child. Treatment, venesection, anodynes, enemata, counter-irritation to spine. Coma came on with the third convulsion and lasted forty-eight hours after delivery. Mind wandering for several days. The child had been dead for several days, at least.

Dr. Cady thought an exaltation of the *reflex action* of the cord, under the influence of pregnancy, was a sufficient predisposing cause of puerperal convulsions to permit exciting causes of various kinds to call forth convulsive action.

Dr. C. E. BREWSTER reported eight cases, as follows:—

CASE I.—Season, summer. Age, between 15 and 20. Sanguine temperament. Second pregnancy, at term. Treatment, venesection and anodynes. Mother recovered, child survived. No convulsions after venesection. Duration of labor, twenty-four hours.

CASE II.—Feb. 24th, 1860. Age, between 20 and 30. Plethoric habit. Fourth pregnancy, at term. Convulsions came on four hours after delivery; the patient had left her bed and walked about. Death in thirty-six hours after the first convulsion. Treatment, counter-irritation to spine, injections, and venesection after second convulsion.

CASE III.—April 24th, 1854. Age, 20–30. Plethoric habit. Third pregnancy, at term. Convulsions twelve hours after delivery—exciting cause, improper diet. Coma after two or three convulsions. Recovered. Treatment, venesection, cathartics, injections, counter-irritation. Recovery slow.

CASE IV.—July 8th, 1855.—Age, 20–30. Robust constitution. First pregnancy, at term. Convulsions came on twenty-four hours after delivery. Coma with first convulsion. Recovery. Treatment, venesection, cathartics, counter-irritation. Only two convulsions occurred.

CASE V.—July 14th, 1847. Age, 20-30. Robust constitution. First pregnancy, at term. Coma with first convulsion. Duration of labor, twenty-four hours; delivery with forceps. Two convulsions occurred. Mother recovered; child survived. Treatment, venesection, anodynes. No convulsions after venesection. Cause, pressure on perinæum.

CASE VI.—September 13th, 1850. Age, 20-30. A robust, colored woman. First pregnancy, at term. Labor began with convulsions and coma, and lasted twelve hours; coma and convulsions for twenty-four hours. Mother recovered; child survived. Treatment, venesection, cathartics, anodynes. Mind wandering for several days.

CASE VII.—Seen with Dr. Cady and reported with his cases, No. 5.

CASE VIII.—Was seen in consultation; moribund.

DR. BREWSTER laid little stress upon the theories of puerperal convulsions; the symptoms he had regarded as those of congestion of the central nervous system. He had reliance on venesection, and counteracting the exciting local cause; thought his experience militated against the theory of blood poisoning from defective respiration. The majority of his cases had been of robust, plethoric, hard-working active females, and had occurred in the summer or autumn, under outdoor exercise, pure air, and active respiration.

DR. C. C. HOLCOMB reported the following cases:—

CASE I.—Season, spring. Age, 20-30; pale, lymphatic female; second pregnancy, at term. Result, death of mother and child. Treatment, venesection. Convulsions for five hours, and coma from the first hour to death.

CASE II.—Season, spring. Age, 20-30. Robust constitution. Second pregnancy, at term. Result, mother and child saved. Treatment, venesection, and anodynes. Coma for twelve hours after delivery.

CASE III.—Season, winter. Age, 20-30. Robust constitution. Second pregnancy, at term. Result, death of mother, child saved. Treatment, venesection. Patient became comatose immediately after delivery; lived five hours.

CASE IV.—Season, spring. Age, 20-30. Pale, lymphatic female. First pregnancy, at term. Result, mother died, child saved. Convulsion and coma came on forty-eight hours after delivery; death in two and a half hours.

DR. HOLCOMB stated that the majority of his cases were second labors; it should be taken into account that first labors were more numerous than successive ones. His cases had been marked by the premonitory symptom of sudden blindness, or a bright object seeming to move before the eyes.

DR. H. H. CHILDS stated that there was no doubt that a great majority of the cases of puerperal convulsions were in first pregnancies.

DR. STARKWEATHER reported a case of convulsions in first pregnancy, resulting from a fall, in which he attempted to bleed, but the blood would not flow. He cupped the spine and back of the neck, and employed counter-irritation. Convulsions lasted eight hours. Death, in coma, an hour after delivery.

DR. JENNINGS reported—

CASE I.—In December. Age, 41. Robust constitution; first pregnancy, at term. Result, recovery of mother, death of child. Treatment, copious bleeding four times. Perforated the head and

delivered with forceps; enema, cathartic; pulse between 60 and 80. Patient well in two weeks.

CASE II.—In August. Age, 28. Nervous temperament. Second pregnancy, at sixth month. Result, death. Treatment, copious venesection. Convulsions for four hours; death an hour after delivery.

CASE III.—In March. Age, 18. Robust constitution; sanguine temperament. First pregnancy, about fifth month. Result, death. Treatment, fluid ext. of *Cannabis Indica*. Sinapisms to spine. Convulsions of a tetanic character. No convulsions after delivery; death in four hours after.

DR. COLLINS invited the Society to meet at his residence in Great Barrington, and dine with him, at its next meeting. The invitation was accepted, a vote of thanks was passed, and the Society adjourned.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 17, 1862.

LAMBERT'S ELASTIC TOURNIQUET.—If there ever was a time demanding the exercise of the highest powers of human ingenuity in contriving methods for protecting and preserving the lives of soldiers in camp and on the field of battle, now is the time and this is the country which should call it forth. The past year's experience shows that the national mind is most actively engaged in this work. Very numerous and useful sanitary suggestions have been made, and many valuable lives have doubtless been saved thereby. Perhaps the most efficient agent that has ever been proposed to diminish the fatality of the battle-field, is the little instrument the name of which stands at the head of this article. Those who have not looked into the subject hardly realize how great is the mortality in battle from hæmorrhage alone. Sir George Ballingall says that "three fourths of those killed in battle are supposed to die from the escape or extravasation of blood." It does not follow that because no large artery is wounded, a comparatively rare occurrence, hæmorrhage is not to be dreaded. The vital fluid may ooze away gradually from an incised or lacerated wound, when the unfortunate sufferer may be lying for hours on the field—a wound in itself not likely to be fatal—until complete exhaustion prevents the reaction of the vital powers. Now all such cases may be saved, as well as the graver ones where large arteries are involved, by this simple instrument, which every soldier can apply, for himself, and which every soldier ought to have.

Lambert's tourniquet may be described as consisting of two concavo-convex metallic plates, one for pressure over the principal artery of the limb, the other for counter-pressure. From each end of these plates springs a wing, which is connected by a hinge-joint for purposes of packing, but which in use stands off at a tangent from the limb, in the same general direction as the compressing pad. A short strap of inelastic webbing is attached to one of the wings of the compressing pad, and passes through a loop at the back of the opposite pad and over the ends of the wings, which latter hold the strap off from the limb itself. The effect of this contrivance, when the tourniquet is applied, is to ensure the most thorough compression of the artery

without the least strangulation of the limb. The short inelastic strap is buckled to a long elastic one, which is to be wound around the limb, carrying it across from the wings of one pad to those of the other. Practical experiment has shown us that in this way the current of the artery may be completely stopped, and yet collateral circulation may go on under the bridges above and below, made by the elastic strap and the wings. Nothing could be more admirable. The instrument is very portable, and is packed in a small box which might be easily carried in the pantaloons pocket. Our present purpose is to urge its adoption in every regiment of the army, not for the exclusive use of the surgeon, but to be carried by every man for his own preservation. The United States Government have already adopted it as a field tourniquet to the exclusion of all others, but the limited number supplied is quite insufficient for the desired purpose. Army surgeons have estimated that, if furnished to each soldier, *at least five per cent.* of those fatally wounded might be saved. The manufacturers furnish it at a very low price, so that the cost need be no serious obstacle to its being supplied to every soldier. That it is a real life-preserver, and would be of incalculable value if generally used, is proved by the fact, of which there is reliable evidence, that at least two hundred lives have already been saved by it, which would else have ebbed out on the field of battle before aid from the surgeon could have been obtained.

An effort is making to induce the legislatures of the different States to furnish at least fifty of these tourniquets to each hundred men that they send into the field, to be carried in the pockets of the soldiers themselves; one for each man would be better, and the cost is trifling. Already has this provision been made by the legislatures of Connecticut and New Hampshire, and by the Governor of Maine, for the troops of their respective States. As yet nothing has been done in Massachusetts, but the matter is too important to be allowed to wait for the tardy assembling of the next legislature. If it can be done in no other way, a subscription should be raised at once; and there can be no question the money for such a purpose could be obtained in a single day.

In conclusion, we may say that this instrument answers all the purposes for which a tourniquet is ever employed. For the compression of arteries for the cure of aneurism, should a screw and pad be desired in addition to the means of pressure which it provides, for the trifling additional expense of twelve cents these can be adjusted to it.

NEW ENGLAND SOLDIERS' RELIEF ASSOCIATION, No. 194 BROADWAY, N. Y.—This Association, representing the Sons of New England resident in the city of New York, was organized—“*To procure the necessary means, and to provide suitable care, attendance and accommodations for the sick, disabled and wounded New England soldiers, as they pass through the city on their way homeward from the war.*” MEDICAL BOARD:—E. R. Peaslee, M.D., *President*; Louis A. Sayre, M.D., *Vice President*; W. R. Donaghe, M.D., *Secretary*. *Visiting Surgeons*:—Drs. F. J. Bumstead, W. R. Donaghe, E. R. Peaslee, H. B. Sands, L. A. Sayre, W. H. Van Buren. *Visiting Physicians*:—Austin Flint, A. K. Gardner, Horace Green, E. W. Lambert, B. W. McCready, A. Underhill, J. Worster. Alfred North, M.D., *Resident Surgeon*.—*American Medical Times*.

ROOT OF A CANINE TOOTH LODGED IN THE THICKNESS OF THE LOWER LIP, SIMULATING A CANCEROUS TUMOR.—M. Landyck, of Dunkirk, has published this case, referring to a lady forty years of age. She had always suffered with her teeth, and had but a few incisors left, the rest of the jaws presenting roots more or less firmly wedged, and alveoli more or less decayed. Towards the end of the year 1851, she felt a small tumor forming in the lower lip on the left side, which tumor soon filled the space below the internal aspect of the lip and gum. Pain was subsequently experienced, and a few months afterwards the patient could hardly eat. She sent for M. Landyck, who discovered a large tumor situated as above described, and ulcerating. Ablation was not proposed, as the lady was very nervous, and cauterization was resorted to. In the meanwhile parturition took place quite normally, and, whilst using the caustic some time afterwards, M. Landyck felt a hard substance in the tumor: by then making a crucial incision, he discovered a long root of the canine tooth, covered with a thick layer of calcareous matter. It was placed horizontally, the apex turned towards the lip, and its upper part adhering to the bone. This being removed, the tumor disappeared and the patient was freed from all uneasiness.—*Lancet*.

DR. JAMES G. BRADT of Lowell, Assistant Surgeon of the 26th regiment, has been commissioned as Surgeon, and Dr. Lemuel M. Willis of Lynn, as Assistant Surgeon of the same regiment.

VITAL STATISTICS OF BOSTON.
FOR THE WEEK ENDING SATURDAY, JULY 12TH, 1862.
DEATHS.

	Males.	Females	Total.
Deaths during the week, ...	43	39	82
Average Mortality of the corresponding weeks of the ten years, 1851-1861,	39.1	35.3	74.4
Average corrected to increased population, ...	..	..	83.05
Deaths of persons above 90, ...	..	..	..

Mortality from Prevailing Diseases.

Phthisis.	Chol. Inf.	Croup.	Scar. Fev.	Pneumonia.	Variola.	Dysentery.	Typ. Fev.	Diphtheria.
14	4	0	5	1	1	2	3	0

METEOROLOGY.

From Observations taken at the Observatory of Harvard College—For the week ending June 28th.

Mean height of Barometer, ...	29.988	Highest point of Thermometer, ...	81.0
Highest point of Barometer, ...	30.240	Lowest point of Thermometer, ...	50.0
Lowest point of Barometer, ...	29.770	General direction of Wind, ...	West.
Mean Temperature, ...	64.9	Am't of Rain (inches), ...	2.13

For the week ending June 14th, omitted in our last issue:—Mean of barometer, 29.935; highest point of barometer, 30.184; lowest point of barometer, 29.554. Mean of thermometer, 61.8; highest point of thermometer, 81; lowest point of thermometer, 45. General direction of wind, W.S.W. Amount of rain (in inches), 0.15.

For the week ending June 21:—Mean of barometer, 29.955; highest point of barometer, 30.333; lowest point of barometer, 29.610. Mean of thermometer, 63.8; highest point of thermometer, 80; lowest point of thermometer, 41. General direction of wind, S.W. Amount of rain (in inches), 0.00.

BOOKS RECEIVED.—A New Edition of Dr. Walshe's Practical Treatise on Diseases of the Heart. (From Blanchard & Lea.)

DEATHS IN BOSTON for the week ending Saturday noon, July 12th, 82. Males, 43—Females, 39.—Abscess, 1—accident, 4—congestion of the brain, 2—disease of the brain, 4—inflammation of the brain, 2—cholera infantum, 4—cholera morbus, 3—consumption, 14—convulsions, 3—diarrhoea, 1—dropsy, 3—dropsy in the head, 3—drowned, 4—dysentery, 2—epilepsy, 1—scarlet fever, 5—typhoid fever, 3—gastritis, 1—disease of the heart, 6—hernia (strangulated), 1—intemperance, 1—inflammation of the lungs, 1—morbus, 2—necrosis, 1—old age, 1—paralysis, 2—pleurisy, 1—premature birth, 1—scrofula 1—small-pox, 1—tonsillitis, 1—unknown, 1.

Under 5 years of age, 23—between 5 and 20 years, 8—between 20 and 40 years, 24—between 40 and 60 years, 17—above 60 years, 5. Born in the United States, 54—Ireland, 20—other places, 8.